

DEMOUNTING AND MOUNTING PROCEDURES FOR TUBELESS TRUCK AND BUS TIRES

TIRE AND RIM SERVICING CAN BE DANGEROUS AND MUST ONLY BE PERFORMED BY TRAINED PERSONNEL USING PROPER PROCEDURES AND TOOLS.

FAILURE TO READ AND COMPLY WITH ALL OF THESE PROCEDURES MAY RESULT IN SERIOUS INJURY OR DEATH TO YOU AND OTHERS.



PLEASE NOTE: THIS IS CHART 1 OF A 3-CHART SET. BE SURE TO ALSO READ, UNDERSTAND AND COMPLY WITH CHART 2 RE: DEMOUNTING AND MOUNTING PROCEDURES FOR TUBE-TYPE TRUCK AND BUS TIRES, AND CHART 3 RE: MULTI-PIECE RIM MATCHING

WARNING

Completely deflate any tire by removing the valve core before removing the tire/wheel assembly from the axle if there is known or suspected damage to the tire or wheel or if the tire has been operated at 80% or less of its recommended operating pressure. Demount, inspect and match all tire and rim parts before re-inflating in a restraining device.

WARNING

NEVER use starter fluid, ether, gasoline, or other flammable materials and/or accelerants to lubricate or to seat the beads of a tire. This practice can cause the explosive separation of the tire/wheel during servicing or during highway use, which may result in serious injury or death.

WARNING

NEVER inflate beyond 40 psi to seat any tire beads. NEVER stand, lean, or reach over the tire rim/wheel assembly in the restraining device during inflation. Even if a tire is in a restraining device, inflating beyond 40 psi when trying to seat the beads is a DANGEROUS PRACTICE that may break a tire bead or the rim/wheel with explosive force and possibly result in serious injury or death.

WARNING

Any inflated tire mounted on a wheel contains explosive energy. The use of damaged, mismatched or improperly assembled tire and wheel components can cause the assembly to separate with explosive force. If struck by an exploding tire, wheel component, or the air blast, you or someone else may be seriously injured or killed.

WARNING

Mismatching tire and rim diameters is dangerous. A mismatched tire and rim assembly may separate and can result in serious injury or death. This warning applies to 15" and 16.5" 16" and 16.5" 15" and 18.5" 22" and 22.5" 24" and 24.5" tire and rim assemblies as well as other sized assemblies. NEVER assemble a tire and rim unless you have positively identified and correctly matched the tire and rim diameter.

WARNING

NEVER assemble a tire and rim unless you have positively identified and correctly matched the tire and rim diameter. If an attempt is made to seat the tire bead by inflating on a mismatched rim/wheel, the tire bead will break with explosive force and may result in serious injury or death.

1 BEFORE SERVICING ANY TIRE RIM/WHEEL ASSEMBLY

- ALWAYS comply with the procedures on this chart and in the tire/wheel manufacturer's catalogs, instruction manuals or other industry and government instructional materials.
- Use a non-flammable vegetable or soap-based lubricant on the beads and rim surfaces to make tire demounting and mounting easier.
- Use proper tools to demount or mount tires and rims (refer to "Typical Tire Service Tools"). NEVER strike the tire/wheel assembly with a steel duck-bill hammer to unseat the beads and do not strike the bead of the hammer with another hand-faced hammer – use a rubber mallet or plastic dead blow hammer. Side impact

- bead unseating tools are the preferred tools for unseating beads on tubeless tires.
- NEVER refit any tire that has been operated in a run-flat or underventilated condition (i.e., operated at 80% or less of recommended operating pressure). Demount, inspect and match all tire and rim components before re-inflating in a restraining device with the valve core removed.
- If an emergency puncture repair inflator was used on a tubeless tire, deflate and reinflate the tire several times to remove potentially explosive propellant before servicing the tire.

WARNING

IF YOU DO NOT KNOW HOW TO USE TIRE SERVICING TOOLS – STOP! TIRE SERVICING MUST ONLY BE PERFORMED BY TRAINED PERSONNEL. FAILURE TO FOLLOW PROPER PROCEDURES CAN RESULT IN SERIOUS INJURY OR DEATH.

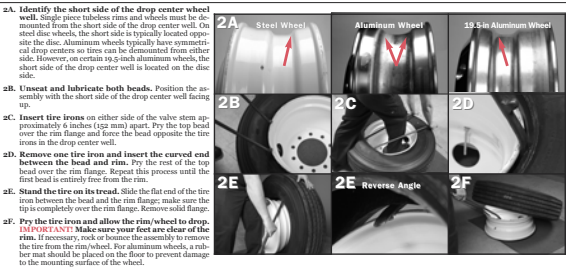
- ALWAYS wear adequate protective eye wear (or face shield), protective footwear, and ear protection while servicing tires to avoid injury.
- NEVER use a tire tool for anything except demounting and mounting tires.
- NEVER use an extension or "cheater" bar with tire irons.
- ALWAYS use soft-faced hammers when driving tire irons or assembling components.
- NEVER use a hammer with a loose or cracked handle.
- NEVER use a bent, cracked, chipped, dented or mushroomed tool. Keep tools clean and inspect them frequently.
- NEVER alter or apply heat to any tire service tool.



2 DEFLATING AND DEMOUNTING TIRE FROM RIM/WHEEL ASSEMBLY

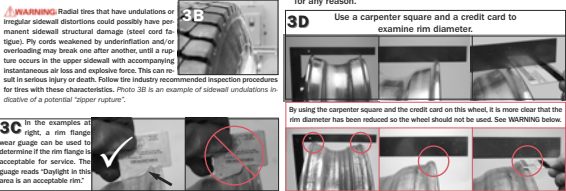
- ALWAYS completely deflate the tire assembly before attempting to demount. Remove the valve core and insert a wire down the valve stem to ensure complete deflation. NEVER demount a tire from a rim unless you are sure it is completely deflated.
- Loosen beads by using a slide impact bead unseating tool, duck bill hammer with a rubber mallet, or other bead unseating tool. Both beads must be loosened before demounting a tire.

TUBELESS: SINGLE PIECE



3 INSPECTING TIRE AND RIM/WHEEL COMPONENTS

- LOOKS conduct a visual and tactile inspection of the tire.
- ALWAYS and FEEL for any damage or evidence of being operated overloaded and/or in a run-flat condition (80% or less of recommended operating inflation pressure). Photo 3A is an example of over-inflation damage created by an underventilated and overloaded condition.
- Remove rust, dirt, or foreign material from all tire and wheel mounting surfaces.
- Inspect rim/wheel. NEVER use any single-piece rims/wheels that are worn, bent, cracked, or pitted by corrosion. Clearly mark and remove all unserviceable parts from the service area. See examples in 3C and 3D.
- DO NOT repair, weld, heat or brace any rim parts or components for any reason.
- Use a carpenter square and a credit card to examine rim diameter.

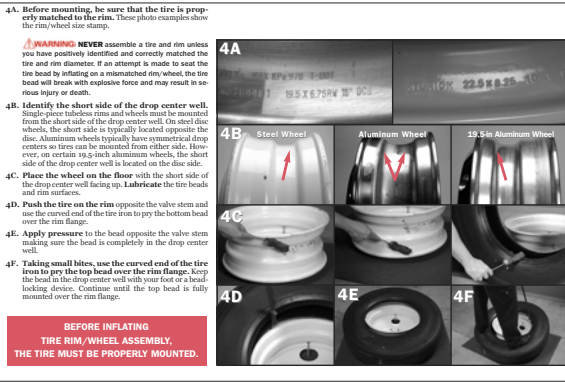


WARNING

ANY INFLATED MOUNTED ON A WHEEL CONTAINS EXPLOSIVE ENERGY. THE USE OF DAMAGED, MISMATCHED OR IMPROPERLY ASSEMBLED TIRE AND WHEEL COMPONENTS CAN CAUSE THE ASSEMBLY TO SEPARATE WITH EXPLOSIVE FORCE. IF STRUCK BY AN EXPLODING TIRE, WHEEL COMPONENT, OR AIR BLAST, YOU OR SOMEONE ELSE MAY BE SERIOUSLY INJURED OR KILLED.

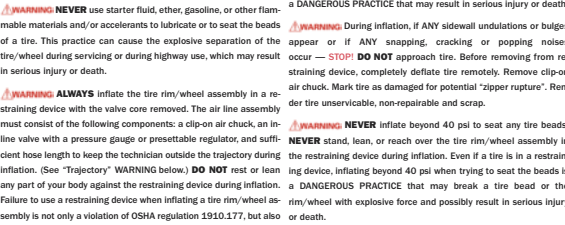
4 MOUNTING TIRE ON RIM/WHEEL ASSEMBLY

TUBELESS: SINGLE PIECE



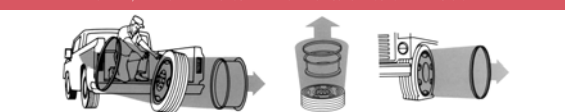
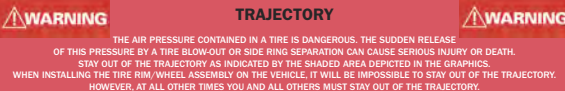
5 INFLATING TIRE RIM/WHEEL ASSEMBLY

- TIRE AND RIM SERVICING CAN BE DANGEROUS AND MUST ONLY BE PERFORMED BY TRAINED PERSONNEL USING PROPER PROCEDURES AND TOOLS. FAILURE TO READ AND COMPLY WITH ALL OF THESE PROCEDURES MAY RESULT IN SERIOUS INJURY OR DEATH TO YOU AND OTHERS.
- DANGEROUS PRACTICE that may result in serious injury or death.
- WARNING NEVER use starter fluid, ether, gasoline, or other flammable materials and/or accelerants to lubricate or to seat the beads of a tire. This practice can cause the explosive separation of the tire/wheel during servicing or during highway use, which may result in serious injury or death.
- WARNING ALWAYS inflate the tire rim/wheel assembly in a restraining device with the valve core removed. The air line assembly must consist of the following components: a clip-on air chuck, an in-line valve with a pressure gauge or presettable regulator, and sufficient hose length to keep the technician outside the trajectory during inflation. (See "Trajectory" WARNING below.) DO NOT rest or lean any part of your body against the restraining device during inflation. Failure to use a restraining device when inflating a tire 19.0/17", but also assembly is not only a violation of OSHA regulation 1910.177, but also
- DANGEROUS PRACTICE that may result in serious injury or death.
- WARNING NEVER inflate beyond 40 psi to seat any tire beads. NEVER stand, lean, or reach over the tire rim/wheel assembly in the restraining device, inflating beyond 40 psi when trying to seat the beads is a DANGEROUS PRACTICE that may break a tire bead or the rim/wheel with explosive force and possibly result in serious injury or death.



STEP-BY-STEP INFLATION PROCEDURES

- Before inflating any tire rim/wheel assembly, be sure to read, understand and comply with ALL WARNINGS.
- After mounting the tire on the rim, use a compressed air tank with quick release valve to inflate the tire. Do not exceed 40 psi before placing the assembly in a restraining device.
- Place the assembly in an OSHA-compliant restraining device, such as a tire safety cage. Photo 5A is an example of one type of a restraining device. Manufacturers recommend that restraining devices be freestanding and located at least one foot away from any flat or solid surface.
- Inflate the tire with the valve core removed, using a clip-on air chuck with an in-line valve or pressure regulator and a sufficient length of hose. Inflate to 20 psi in restraining device. IMPORTANT! Look for distortions, undulations, or other irregularities in the tire sidewall, such as in Photo 5E. Listen for any popping or snapping sounds. If ANY of these conditions are present – STOP! DO NOT approach tire. Before removing from restraining device, completely deflate tire remotely. Remove clip-on air chuck. Mark the tire damaged for potential "zipper rupture". Render tire unusable, non-repairable and scrap.
- Visually inspect tire/wheel assemblies through the inflation process for improper seating. When inflating a tire, stay out of the trajectory. See "Trajectory" WARNING below. DO NOT stand or lean any part of your body against, or reach over, the restraining device during inflation.
- Once the tire is inflated, inspect both sides of the tire to be sure that the beads are evenly seated. NEVER deflate beyond 40 psi to seat any tire beads. If the beads are not seated at an psi – STOP! Completely deflate, remove from the restraining device, and determine the problem. Reposition the tire on the rim, lubricate, and re-inflate.
- After the tire beads are seated, continue to inflate the tire to its recommended inflation pressure. IMPORTANT! Look for distortions, undulations, or other irregularities in the tire sidewall, such as in Photo 5E. Listen for any popping or snapping sounds. If ANY of these conditions are present – STOP! DO NOT approach tire. Before removing from restraining device, completely deflate tire remotely. Remove clip-on air chuck. Mark tire as damaged for potential "zipper rupture". Render tire unusable, non-repairable, non-separable and scrap.
- If none of these "zipper" conditions are present, remove clip-on air chuck, install the valve core, and adjust the inflation pressure to the recommended operating inflation pressure.
- Before removing the tire/wheel assembly from the restraining device, always visually inspect for proper seating of the beads and all air leaks.
- Conduct a final inspection. Check for all leaks. Install a suitable valve cap.



You have a right to a safe workplace. If you think your job is unsafe and you have questions, call OSHA. It's confidential. We can help!

THIS CHART MUST BE PRINTED AT LEAST 2' x 3' MINIMUM SIZE. OSHA Occupational Safety and Health Administration U.S. Department of Labor www.osha.gov • (800) 321-OSHA (6742) • TTY (877) 889-9627